

CLAIMS:

1. An apparatus for increasing the quality of sound in improving acoustic output of bass sound,  
5 said from an acoustic source and that is particularly useful apparatus comprising:

an acoustic guide having a first end and a second end, said acoustic guide in the shape of a double helix;

10 a hollow enclosure substantially surrounding said acoustic guide, said hollow enclosure having a first end and a second end;

a pair of acoustic inlet openings defined by said first end of said acoustic guide, said pair of  
15 acoustic inlet openings capable of admitting acoustic waves produced by an acoustic source; and

a pair of acoustic exit openings defined by said second end of said acoustic guide, said pair of acoustic exit openings in communication with said  
20 pair of acoustic inlet openings;

wherein said pair of acoustic inlet openings separate acoustic waves emanating from the acoustic source and direct the acoustic waves to said pair of acoustic exit openings.

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2. The apparatus according to Claim 1, wherein the radius of said acoustic guide is substantially equal to the radius of said hollow enclosure.

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3. The apparatus according to Claim 1, wherein the pitch of said acoustic guide is between about 0.15 and 10 centimeters.

5        4. The apparatus according to Claim 1, wherein the pitch of said acoustic guide is between about 2 and 5 centimeters.

10        5. The apparatus according to Claim 1, wherein said acoustic guide is mounted to the interior surface of said hollow enclosure with material selected from the group consisting of adhesive, foam rubber, and hook-and-loop fasteners.

15        6. The apparatus according to Claim 1, wherein:

      said hollow enclosure includes grooves formed in the interior surface of said hollow enclosure;

20        said grooves in a corresponding relationship with edges of said acoustic guide;

      said acoustic guide mounted in said grooves in the interior surface of said hollow enclosure.

25        7. The apparatus according to Claim 1, wherein said hollow enclosure is substantially circular.

      8. The apparatus according to Claim 1, wherein said hollow enclosure is substantially oval.

9. The apparatus according to Claim 1, wherein each of said pair of acoustic inlet openings is oriented substantially coplanar with respect to one another.

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10. The apparatus according to Claim 1, wherein each of said pair of acoustic exit openings is oriented substantially coplanar with respect to one another.

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11. The apparatus according to Claim 1, wherein said pair of acoustic inlet openings and said pair of acoustic exit openings are oriented substantially parallel to one another.

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12. The apparatus according to Claim 1, wherein said pair of acoustic inlet openings and said pair of acoustic exit openings are oriented in a plane that is substantially perpendicular to the path of acoustic waves produced by the acoustic source.

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13. The apparatus according to Claim 1, wherein said pair of acoustic inlet openings and said pair of acoustic exit openings are oriented in a plane that is substantially parallel to the path of acoustic waves produced by the acoustic source.

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14. The apparatus according to Claim 1, wherein said pair of acoustic inlet openings and

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said pair of acoustic exit openings are substantially semi-circular in shape.

15 15. The apparatus according to Claim 1, wherein said pair of acoustic inlet openings and said pair of acoustic exit openings are substantially circular in shape.

10 16. The apparatus according to Claim 1, further comprising a pair of acoustic paths defined by said acoustic guide, said pair of acoustic paths in the shape of a double helix, said pair of acoustic paths positioned intermediate said pair of acoustic inlet openings and said pair of acoustic  
15 exit openings.

17. The apparatus according to Claim 16, wherein the radius of each of said pair of acoustic paths is substantially equal to the radius of said  
20 hollow enclosure.

18. The apparatus according to Claim 1, wherein said pair of acoustic exit openings further comprises webbing that prevents the admission of  
25 debris into said pair of acoustic paths.

19. The apparatus according to Claim 18, wherein said webbing is made from material selected from the group consisting of foam, wire, woven  
30 textile material, and non-woven textile material.

20. An apparatus for increasing the quality of sound from an acoustic source and that is particularly useful in improving acoustic output of bass sounds, said apparatus comprising:

a hollow enclosure having a first end, a second end, an interior surface, and an exterior surface;

an acoustic source connected to said first end of said hollow enclosure, said acoustic source capable of producing acoustic waves;

an acoustic guide mounted to the interior surface of said hollow enclosure, said acoustic guide in the shape of a double helix, said acoustic guide having a first end and a second end; and

a pair of acoustic paths defined by said acoustic guide, said pair of acoustic paths in the shape of a double helix;

wherein said acoustic guide separates acoustic waves from said acoustic source and directs the acoustic waves along said pair of acoustic paths.

21. The apparatus according to Claim 20, wherein said hollow enclosure is substantially circular.

22. The apparatus according to Claim 20, wherein said hollow enclosure is substantially oval.

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23. The apparatus according to Claim 20,  
wherein said hollow enclosure substantially  
surrounds said acoustic guide.

5        24. The apparatus according to Claim 20,  
wherein said hollow enclosure and said acoustic  
guide define a common axis.

25. The apparatus according to Claim 20,  
10 wherein said acoustic source is a driver.

26. The apparatus according to Claim 20,  
wherein said acoustic guide is made from material  
selected from the group consisting of polymeric  
15 material, metal, wood, synthetic resin, glass, and  
ceramic.

27. The apparatus according to Claim 20,  
wherein the pitch of said acoustic guide is between  
20 about 0.15 and 10 centimeters.

28. The apparatus according to Claim 20,  
wherein the pitch of said acoustic guide is between  
about 2 and 5 centimeters.

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29. The apparatus according to Claim 20,  
wherein said acoustic guide is mounted to the  
interior surface of said hollow enclosure with

material selected from the group consisting of adhesive, foam rubber, and hook-and-loop fasteners.

30. The apparatus according to Claim 20,  
5 wherein:

said hollow enclosure includes grooves formed in the interior surface of said hollow enclosure;

said grooves in a corresponding relationship with edges of said acoustic guide;

10 said acoustic guide mounted in said grooves in the interior surface of said hollow enclosure.

31. The apparatus according to Claim 20,  
wherein said first end of said acoustic guide is  
15 connected to said acoustic source.

32. The apparatus according to Claim 20,  
wherein said first end of said acoustic guide is spaced from said acoustic source.

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33. The apparatus according to Claim 32,  
further comprising an empty chamber defined by the interior surface of said hollow enclosure, said first end of said hollow enclosure, and said first  
25 end of said acoustic guide.

34. The apparatus according to Claim 20,  
wherein the radius of each of said pair of acoustic

paths is substantially equal to the radius of said hollow enclosure.

35. The apparatus according to Claim 20,  
5 further comprising:

a pair of acoustic inlet openings defined by said first end of said acoustic device;

a pair of acoustic exit openings defined by said second end of said acoustic device, said pair  
10 of acoustic exit openings in communication with said pair of acoustic paths and said pair of acoustic inlet openings.

36. The apparatus according to Claim 35,  
15 wherein each of said pair of acoustic inlet openings is oriented substantially coplanar with respect to one another.

37. The apparatus according to Claim 35,  
20 wherein each of said pair of acoustic inlet openings is oriented substantially coplanar with respect to said first end of said hollow enclosure.

38. The apparatus according to Claim 35,  
25 wherein each of said pair of acoustic exit openings is oriented substantially coplanar with respect to one another.



39. The apparatus according to Claim 35,  
wherein each of said pair of acoustic exit openings  
is oriented substantially coplanar with respect to  
said second end of said hollow enclosure.

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40. The apparatus according to Claim 35,  
wherein said pair of acoustic inlet openings and  
said pair of acoustic exit openings are oriented  
substantially parallel to one another.

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41. The apparatus according to Claim 35,  
wherein said pair of acoustic inlet openings and  
said pair of acoustic exit openings are oriented in  
a plane that is substantially perpendicular to the  
15 path of the acoustic waves produced by said acoustic  
source.

42. The apparatus according to Claim 35,  
wherein said pair of acoustic inlet openings and  
20 said pair of acoustic exit openings are oriented in  
a plane that is substantially parallel to the path  
of acoustic waves produced by said acoustic source.

43. The apparatus according to Claim 35,  
25 wherein said pair of acoustic inlet openings and  
said pair of acoustic exit openings are  
substantially semi-circular in shape.

44. The apparatus according to Claim 35,  
30 wherein said pair of acoustic inlet openings and

said pair of acoustic exit openings are substantially circular in shape.

45. The apparatus according to Claim 35,  
5 wherein said pair of acoustic exit openings further comprises webbing that prevents the admission of debris into said pair of acoustic paths.

46. The apparatus according to Claim 45,  
10 wherein said webbing is made from material selected from the group consisting of foam, wire, woven textile materials, and non-woven textile material.

47. The apparatus according to Claim 20,  
15 further comprising at least one leg secured to the exterior surface of said hollow enclosure.